

Remote Firing Device

RFD (NEW ROSE)

Overview

RFD(Remote Firing Device) is an extremely safe VHF radio controlled device designed for the remote initiation of explosives in a general electromagnetic interference environment.

RFD comprises of a transmitter, two receivers, and accessories One transmitter can fire any number of receivers if loaded with the same firing key and frequency.

Each receiver is designed to detonate 2-4 circuits.

The operating range in open terrain is about 2-4 km, whilst in the screened area such as forest or in building, range of up to 1km is possible.

To ensure a high level of security, a receiver No. and radio channel No. to be used is injected via the cable from a transmitter to receivers



Features

- Digital design with embedded microprocessor
- Individual, in a group or simultaneous operation
- Built to Mil Spec 810E specifications for rain proof, vibration, drop test
- Comprehensive protection against the effects of EMI
- Multiple redundant transmission for improved range in EMI environments
- Remote control mode, timer mode, and remote control during timer mode
- Receiver loaded by the transmitter with unique ID can only activate firing and has built-in triple safety key feature
- All functions can be manipulated by front keypad
- Easy to carry by light weight and compact-size
- Easy to keep and store by a special briefcase
- Self-diagnostic function

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Receiver

The receiver is a rainproof aluminum housing containing the electronics necessary to accept and interrogate firing commands, together with circuitry to disseminate the correct information to the firing circuit.

The receiver is guaranteed to fire through 25 ohms of line resistance.

A socket is externally mounted in order to download the required receiver No. and radio channel No. A switch to select power On/Off.

Two push type terminals for connecting detonators by wire is mounted on the top. Keypad(4 by 3) to select a command , LED to display a present status such as battery, RSSI, continuity, armed status, operation modes, and configuration code.

In timer mode, firing time is adjustable from 3min. up to 24 hours.

A rechargeable Lithium-Ion battery pack used. Battery life is about 24 hours in timer mode operation after full charge at 25 degree C.

Safety Features

A two handed key press to transmit a firing command.

The receiver No. and radio channel No. must be downloaded to the receiver, via the cable, before the receiver accept the firing command

The receiver has a preset safe to arm period. After arming and on receipt of a firing command, comprehensive software checks are carried out to validate the authenticity of the received signal.



Transmitter

The transmitter is a handheld rainproof aluminum housing containing the VHF radio and other associated electronics.

A socket is externally mounted in order to download the required receiver No. and radio channel No.

A switch to select power On/Off

Keypad(4 by 5) to select a command , LED to display a present status such as battery, operation modes, and configuration code

Operators can:

- configure receivers
- fire individual receiver and multiple receivers
- detect low battery
- select test mode for receiver operator to check RSSI level in a remote area

A rechargeable Lithium-Ion battery pack used. Battery life is over 100 times transmission in test mode operation after full charge at 25 degree C

Specifications

▪ Operating Range

- Short antenna: 2-4 Km in open terrain
- Long antenna : 5-10 Km in line of sight

▪ Firing Output power - 150MJoules at 35 volts

▪ Frequency Range - VHF

▪ Size - 62(W) x 53.2(D) x 130(H) mm

▪ Weight - 0.6 Kg (Antenna & battery pack)

▪ Power Source - 7.2Volt rechargeable Ni-MH battery

▪ Environmental Temperature Range

- operating: -10 C to +50 degree C
- Storage : -20 C to +71 degree C